Distribution of prompt neutron emission probability for fission fragments in spontaneous fission of ^{252}Cf and ^{248,244}Cm.

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Neutrons emitted in the fission event were measured separately for each complementary fragment in correlation with fission fragment energies. Two high efficiency Gd-loaded liquid scintillator tanks were used for neutron registration. Fission fragment energies were measured using a twin Frisch gridded ionization chamber with a pin-hole collimator. The neutron multiplicity distributions were obtained for each value of the fission fragment mass and energy and corrected for neutron registration efficiency, background and pile-up. The dependencies of these distributions on fragment mass and energy for different energy and mass bins, as well as mass and energy distribution of fission fragments are presented and discussed.

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